

1. A ring laser gyro comprising two or more ring lasers, said ring lasers being optically independent of each other, wherein:

angular velocity of rotation of said gyro is detected by a signal representing a difference between a first beat frequency generated by said first ring laser and a second beat frequency generated by said second ring laser.

3. A ring laser gyro according to claim 1, wherein, when angular velocity in a direction is increased, frequency of an impedance change with respect to said first ring laser is decreased, while frequency of an impedance change with respect to said

second ring laser is increased.

4. A ring laser gyro according to claim 1,
wherein

5 said two ring lasers have a tapered portion in a
part of their respective optical waveguides;

said tapered portion is formed of a first portion where width of said optical waveguide becomes larger along a propagation direction of a clockwise laser beam and a second portion where width of said optical waveguide becomes smaller; and,

in said first semiconductor ring laser, said first portion is longer than said second portion, while, in said second semiconductor ring laser, said second portion is longer than said first portion.

5. A ring laser gyro according to any one of claims 1 to 4, wherein ratio of area surrounded by a resonator to length of a revolution of said resonator in said first ring laser is equal to that in said second ring laser.

6. A ring laser gyro according to claim 1,
wherein shapes of resonators of said first and second
25 ring lasers are mirror images of each other.

7. A ring laser gyro according to claim 1.

8. A ring laser gyro according to claim 7,
5 wherein said planes in parallel with each other are one
plane.

10. A ring laser gyro according to claim 1,
15 wherein said planes nonperpendicular to each other,
said planes in parallel with each other, or said one
plane are/is other than surfaces/a surface of
semiconductor substrates/a semiconductor substrate.

said semiconductor ring laser gyro comprises an absorber or a light-shield for preventing optical coupling between said two ring lasers; and

25 said absorber or said light-shield does not return
reflected light to said ring lasers.

said two semiconductor ring lasers are
respectively driven at constant current and a voltage
5 change is detected from said electric terminals.

said two semiconductor ring lasers are
10 respectively driven at constant voltage and a change in
drive current is detected from said electric terminals.

15. A method of processing a signal from a ring laser gyro according to claim 1, wherein:

25 16. A method of processing a signal from a ring
laser gyro according to claim 15, wherein said
operation is subtraction or negatively weighted

average.

17. A method of processing a signal from a ring laser gyro according to claim 16, wherein said weight
corresponds to a ratio of said beat frequencies in said
static state in said ring lasers.

18. A method of processing a signal from a ring laser gyro according to claim 16, wherein a ring laser gyro according to claim 1 is driven, said calculating processing is carried out based on said frequencies of said impedance change in said respective semiconductor ring lasers, and drive conditions are controlled using the result of said calculating processing.

19. A method of processing a signal from a ring laser gyro according to claim 18, wherein said calculating processing is addition or weighted average.

20 20. A method of processing a signal from a ring
laser gyro according to claim 19, wherein said weight
in said weighted average corresponds to a ratio of
length of a revolution of said ring resonator to area
surrounded by said ring resonator between said
25 respective ring resonators.